



**Dr. Homi Bhabha State University, Mumbai**

**The Institute of Science**

**15, Madam Cama Road, Mumbai – 400 032**

**Department of Mathematics**



## **INTERNSHIP REPORT**

**BY**

**SURAJ SANTOSH MISHRA**

**M.Sc DATA SCIENCE SEMESTER II**

**UNDER THE GUIDENCE OF AT SURYA VALLEY SCHOOL,  
PALGHAR**

# CERTIFICATE OF AUTHENTICITY

I SURAJ SANTOSH MISHRA here by certify that the contents of this internship report are true and accurate, reflecting my work and experiences during my internship at Surya valley School ,Palghar

I confirm that the information presented is based on my own observations, efforts, and tasks assigned to me by my supervisors. I have adhered to the guidelines provided by Internship Cell. Dr Homi Bhabha State University Mumbai throughout the internship period. This report is submitted as part of the requirements for the M.Sc 1 sem 2 Data Science and Institute of science, Mumbai. I declare that all information presented is truthful, and I have not engaged in any form of plagiarism or misrepresentation.

Name of the Student: SURAJ SANTOSH MISHRA

Program: MSc 1

Semester: 2

Subject: Data Science

Internship Period:

Company Name: Surya Valley school, Palghar Date:

Signature of the student:

# ACKNOWLEDGEMENT

I am sincerely grateful for the invaluable experience I gained during my internship at Surya Valley School, Palghar. This opportunity has significantly contributed to my personal and professional development.

I extend my heartfelt thanks to Dr. Selby Jose, Head of Department, for his exceptional guidance and unwavering support throughout my internship. His insights and encouragement were instrumental in enhancing my learning experience.

I am also deeply thankful to my project mentor, Raj Patil Sir, whose mentorship provided me with practical knowledge and skills that will benefit me in my future endeavors.

My appreciation goes to Sunil Sir, my college guide, for his continuous support and for facilitating this internship opportunity. His advice and assistance were crucial in navigating the challenges I encountered.

Lastly, I would like to acknowledge my friend, whose constant support and collaboration made this journey more enriching and enjoyable.

Thank you all for your contributions to my internship experience.

NAME OF THE STUDENT: SURAJ SANTOSH MISHRA

1. E-MAIL ID AND PHONE NO: 9594789190

2. NAME OF INSTITUTION/COLLEGE: **The Institute of Science,  
Mumbai**

3. PROGRAM, SEMESTER : MSc 1 , Sem 2

4. SUBJECT: Data Science

5. NAME ADDRESS AND PHONE NO. OF THE  
ORGANIZATION/COMPANY : Surya Valley School, Manor Rd,  
Sajjanpada, Palghar, Maharashtra 401404, 95294 58967

6. PERIOD OF INTERNSHIP:

7. NAME AND SIGNATURE OF GUIDE:

9 SIGNATURE OF STUDENT :

10 DATE OF SUBMISSION:

11 DEPARTMENT OR DIVISION IN WHICH YOU WORKED : Secondary  
Section Teaching Staff

12 ROLES AND RESPONSIBILITIES: During my internship, I taught higher maths in a simple, hands-on way using models and interactive tools so students could easily understand tough topics. At the same time, I visited farmers, asked them about their crops and problems, and gathered information through surveys and interviews. I then used basic statistics to find important patterns—like issues with pests or irrigation—and shared clear recommendations. Finally, I combined both parts into easy-to-follow reports and presentations, showing how math models help students learn and help farmers improve their work.

**13 SKILLS ACQUIRED:** Students understand practical uses of math. Removing their fear by showing how math look like outside the four walls of classrooms. Management skills, Communication skills, teamwork, interpersonal skills, Leadership, Lesson planning, Creativity, Professionalism, Patience, Flexibility, Organizational skills and Time management

**14 CHALLENGES FACED:** Travelling to Palghar felt lot of task at start but then after a week it was doable. At first I was also overwhelmed to be in Such a professional environment and I Had confidence issues whether I will be Able to deliver the work expected from me, But the faculty was really helpful and cheerful

**15 LEARNING OUTCOMES:** Oral and written communication, Critical thinking, organization, problem Solving, decision making, leadership, Interpersonal relationships, creativity, Subject knowledge and professionalism

**16 ANY OTHER INFORMATION REGARDING THE INTERNSHIP:**

**17 CONCLUSION:** My Journey with Surya Valley School has been a transformative journey fill With the meaningful experiences and Personal experiences. I am very excited To carry forward the skills and insights Gained during my internship as I embark Onto the next chapter of academic and the Professional journey.

**18 INITIAL FEEDBACK REPORT (HBSU.AC.IN..... ACADEMICS.... INTERNSHIP...FEEDBACK FORM.... SCAN QR CODE/CLICK THE LINK, SUBMIT THE GIVEN GOOGLE FORM. CHECK COPY ON YOUR EMAIL ID)**

Name of the college/ Institute	Institute of Science, Mumbai
Program, year ,semester	MSc 1, Sem 2
Internship start on (Date)	
Internship end on (Date)	

WEEK	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1						

2						
3						
4						
5						
6						
7						
8						

Signature of Industry Guide/HR manage

**Industry Evaluation report**

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**Student Name: SURAJ SANTOSH MISHRA**

**Date:**

**Name of the Supervisor:**

**Name and Address of the organization/ Industry:** Surya Valley School, Manor Rd,  
Sajjanpada, Palghar, Maharashtra 401404

**Date of internship from:**

**Please evaluate the intern by indicating the frequency with which you observed the following behavior's (Make a ✓ mark)**

Sr.no	Rating parameter	Not fit	Unsatisfactory	Average	Good	Excellent
		<b>Professionalism and learning Experience</b>				
1	Punctuality					
2	Attendance					
3	Adaptability					
4	Applicability					
5	Sincerity					
		<b>Communication and project Management</b>				
6	Responsiveness					
7	Communication					
8	Resilience					
9	Collaboration					
10	Decision making					
		<b>Depth of Knowledge and learning outcome</b>				
11	Creativity					
12	Demonstrated skills					
13	Gold articulation					
14	Openness to learning					
15	Growth					

**Name and signature of the supervisor**

## Student Feedback form

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**Student Name:** SURAJ SANTOSH MISHRA

Date:

**Industrial Supervisor:**

**Title:** Bend the rules and Questionnaire on problems faced by Farmers in achieving proper crop yield

**Supervisor Email:**

**Internship is:** Unpaid

**Company/Organization:** Surya Valley School Internship Address: Surya Valley School, Manor Rd, Sajjanpada, Palghar, Maharashtra 401404

**Faculty Coordinator:** Dr. Selby Jose

**Department:** Mathematics

**Dates of Internship:**

**Internship Description:** Empowering practical mathematics education through collaborative innovation at Surya Valley School.

On April 22nd, 2024, we began a meaningful journey to Surya Valley School in Palghar, united by a shared passion to contribute to their creative learning environment. The school aimed to make mathematics more engaging by developing a mathematical garden. As M.Sc. Data Science students from the Institute of Science, we reached the school at 9 AM, excited to be part of this initiative.

The main focus of the internship was a set of innovative mathematics projects presented by M.Sc. students. These projects covered a wide range of topics—from real-world applications like cryptography to more abstract ideas such as knot theory, set theory, and non-Euclidean geometry—designed to make complex ideas accessible and visually engaging for school students.

As part of this, our group presented a project titled "**Bend the Rules**", which introduced the idea of **spherical geometry**. Through models, activities, and examples, we helped students explore how the rules of geometry change when applied on curved surfaces like spheres. For example, we showed how the sum of angles in a triangle can exceed  $180^\circ$ , and how parallel lines as we know them don't behave the same way on a sphere.

Our aim was to help students understand that the geometry they learn in school (Euclidean geometry) is not the only kind of geometry that exists. The students were very curious and excited to learn something new. To make the session interactive, we included simple puzzles and real-life examples to explain how spherical geometry applies to things like globes, planets, and navigation.

This experience helped students discover a whole new side of mathematics—one that bends the usual rules and opens doors to new ways of thinking.



## Summary: Problems Faced by Farmers in Achieving Proper Crop Yield

*Based on responses from farmers in Maharashtra, mainly Palghar district*

1. **Land Ownership & Size:** Most farmers own their land, with farm sizes between 1.5 to 5.5 acres.
2. **Weather Challenges:** Delayed rains, shorter growing periods, and more pests due to changing weather patterns were commonly reported.
3. **Farming Methods:** Few use sustainable techniques; only some mentioned crop rotation or starting green vegetable farming.
4. **Extreme Weather:** A small number experienced floods or heavy rainfall in recent years.
5. **Major Issues:** Labour shortages, lack of machinery, climate problems, high input costs, and weak infrastructure and insurance support.
6. **New Practices:** Very limited adoption of modern methods—only one farmer shifted to green vegetable cultivation as a new step.
7. **Support Needed:** Farmers seek better seeds, advanced tools, government help, training in new techniques, and improved irrigation.
8. **Farmer Suggestions:** Control labour costs, install drip irrigation, promote crop variety, harvest rainwater, and zone fields for better output.
9. **Key Takeaway:** Farmers understand the problems but lack the resources and training to solve them. Stronger government and institutional support is essential, especially in climate resilience and sustainable agriculture.

This experience has	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
Given me the opportunity to explore a career field					
Allowed me to apply my decision making and problem-solving skills					

Helped me develop my written and oral communication skills					
Provided a chance to use leadership skills					
Expanded my sensitivity to the ethical implications of the work involved					
Made it possible for me to be more confident in new situation					
Given me a chance to improve my interpersonal skills					
Helped me discover new aspects of myself that I didn't know existed before					
Helped me develop new interests and abilities					
Helped me clarify my career goals					
Provided me with contacts which may lead to future employment					
Allowed me to acquire information and/ or use equipment not available at my Institute					

**Q. In the Institute internship program, faculty members are expected to be mentors for students. Do you feel that your faculty coordinator served such a function? Why or why not?**

Yes, I feel my faculty coordinator truly acted as a mentor throughout the internship. They gave clear guidance on my project, provided helpful suggestions for improvement, and were always available when I had doubts or needed support. Their encouragement played a key role in shaping my experience.

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**Q. How well were you able to accomplish the initial goals, tasks, and new skills that were set down in your learning contract? In what ways were you able to take a new direction or expand beyond your contract? Why were some goals not accomplished adequately?**

I was able to achieve most of the goals and tasks mentioned in my learning contract. I improved my presentation and teaching skills, interacted with students effectively, and contributed to classroom activities. I also took initiative beyond the assigned tasks by helping design a project model and leading an interactive session on spherical geometry. This gave me hands-on experience and helped me grow more confident. Most goals were accomplished as planned.

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**Q. What has been the most significant accomplishment or satisfying moment of your internship? What did you dislike about the internship?**

The most satisfying moment was seeing students excited about learning something new—especially when they understood concepts from our “Bend the Rules” project on spherical geometry. It felt great to make math fun and interesting for them. I didn’t dislike any part of the internship; in fact, I enjoyed it thoroughly, especially the positive and curious environment created by the students.

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**Considering your overall experience, how would you rate the internship? (Circle one): Satisfactory / Good / *Excellent***

**Signature of Student:** \_\_\_\_\_

**(College/Institute letter Head)**

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**1. Name of the Student:** SURAJ SANTOSH MISHRA

**2. Mob No:** 9594789190

**3.Roll No:** DS2411

**4. Semester:** II

**5.Period of Training:**

**6. Home address:**

**7. Address of Training Site:** Surya Valley School, Palghar

**8. Address of Training providing Agency:** Surya Valley School, Palghar

**9. Name/Designation of training In-charge:**

**10.Type of Work:** Data Collection by Questionnaire on Problems Faced by Farmers in Achieving Proper Crop Yield. **11.Date of Evaluation:**

**12.Please rate the following:**

Sr.no	Particulars	Grade/ Marks
1	Professionalism and learning experience	
2	Communication and Project Management	
3	Depth of Knowledge and Learning Outcome	
4	Report Writing	
5	Presentation	
	Total	

Overall Grade:

Additional Remarks:

Name and Signature of subject Guide



photos

17/06/2025





**HBSU**

Dr. Homi Bhabha State University

**DR. HOMI BHABHA STATE UNIVERSITY, MUMBAI**

Mahatma Gandhi Marg, Fort, Mumbai- 400032

# **Certificate**

## **Of Internship Completion**

*This is to certify that,*

***Suraj Santosh Mishra***

*a student of* \_\_\_\_\_ ***The Institute of Science, Mumbai***

*pursuing* ***M.Sc. 1, Sem 2*** *in the subject of* ***Data Science***

*has successfully completed an internship at*

***Surya Valley School, Palghar***

*fulfilling the required minimum 120 hours*

*as per university guidelines.*

*He / She actively participated in the assigned tasks,  
gaining valuable practical experience and  
demonstrating commitment, discipline and professionalism.*

  
**Dr. S.P. Patil**

**College / Institute  
Guide**

**Head of  
the Department**

**Nodal Officer  
Internship Cell  
HBSU, Mumbai**



The major challenges were categorized and counted. Below are the most frequently mentioned problems:

Challenge Type	Description	Frequency
Climate-related Issues	Climate change, delayed/ rainfall	High
Financial Problems	High interest loans, low affordability	High
Technological Limitations	High cost of modern tech, lack of machinery	Medium
Labor- Related Issues	High labor costs, labor shortage	Medium
NO Specific Issues Mentioned	None	Low

What is the biggest challenge you face in achieving proper crop yield?

1. Climate Change

- Most farmers said changing weather is a big problem.

- Sudden rains, droughts, and temperature changes are affecting crops.

## 2. High Labor Charge

- Farmers said hiring workers is too expensive.
- This increases the cost of farming.

## 3. Soil Problems and Costly Pesticides

- Soil quality is going down.
- Fertilizers and pesticides are costly and hard to afford.

## 4. Unpredictable Weather

- Weather is not stable – sometimes too much rain, sometimes none.
- It's hard to plan farming activities.

## 5. Water Shortage, No Subsidy, Pest Attack

- Lack of water for farming.
- Government support or subsidy is missing.
- Pests are damaging the crops.

## **Village-Wise Highlights:**

Bahadoli – Most said climate change is a problem, but many also said they have no big issues.

Chahade – Many problems: high labor cost, climate issues, and soil/pesticide costs.

Tamsai – Climate change is the biggest issue here.

## **Conclusion:**

Most farmers are facing climate-related issues, high costs, and lack of support.

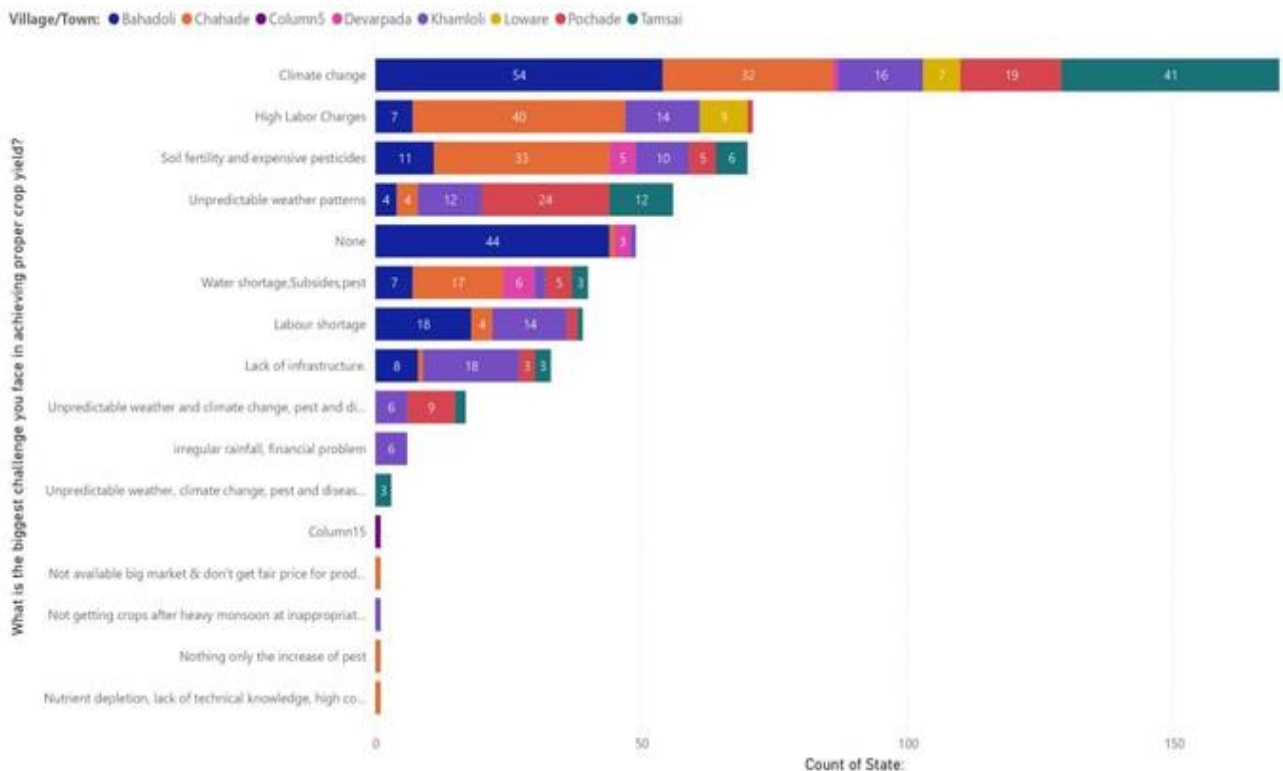
They need help in the form of:

Better weather planning



Government support (subsidy, schemes

Affordable seeds, fertilizers, and water supply



Climate problem faced by farmers

1. Most Common Issue:

- Delayed or Erratic Rainfall is the most frequently reported issue, with over 270 respondents citing it.
- Top affected villages:

Chahade (65), Column5 (64), Bahadoli (53), Tamsai (42), and Chahade (35)

2. Combined Weather Challenges:

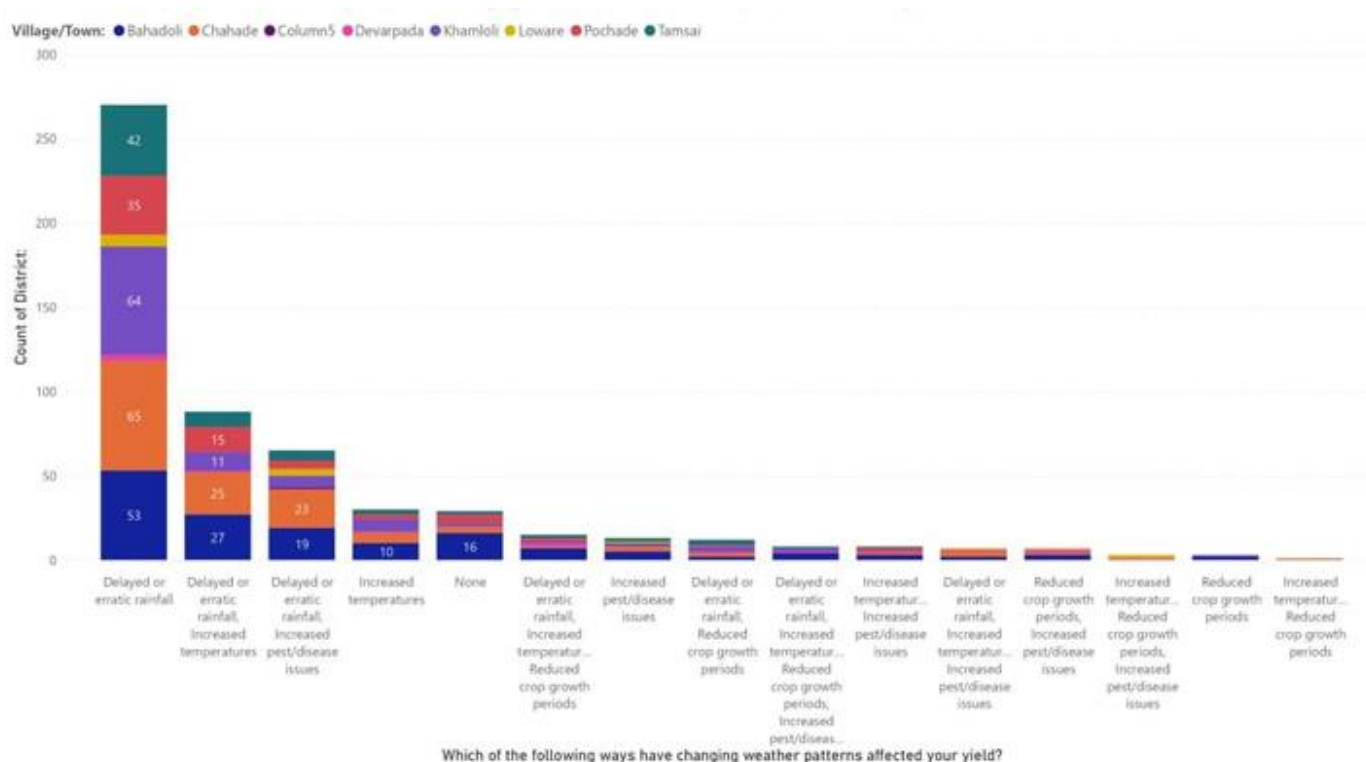
- Many respondents reported multiple weather issues together:
- Delayed rainfall = Increased temperatures: **80** respondents.
- Delayed rainfall = Pest/Disease Issues: **75** respondents.

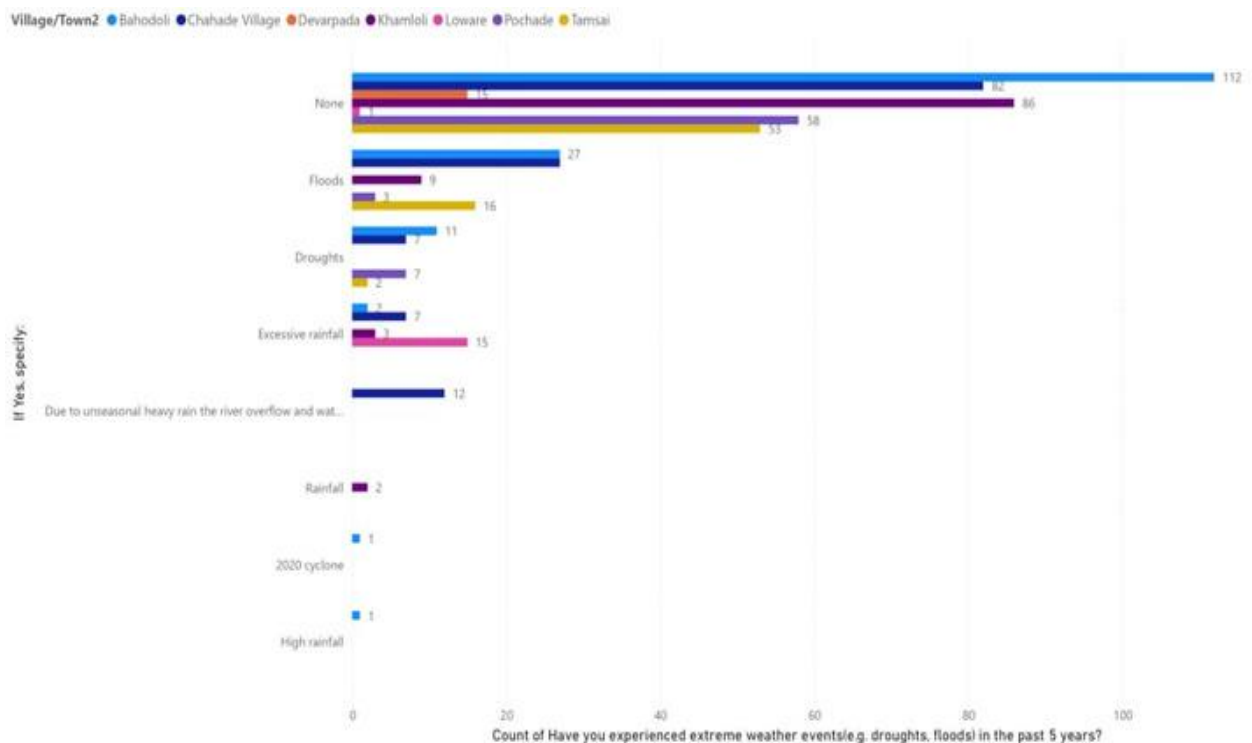
### 3. Other Notable Issues:

- Increased Temperatures Only: **50** respondents.
- No Issues Reported: **40** respondents.
- Other combinations (e.g., pest issues, reduced crop growth, etc.) were reported by fewer people.

### Village-Wise Insights:

- Chahade and Column5 reported the highest counts overall.
- Tamsai, Devrapada, and Pochade had relatively fewer reports but still showed concern over erratic rainfall and temperature rise.





## Financial problem faced by farmers

The financial barriers farmers face, categorized by different villages (e.g., Bahadoli, Chalade, Columis, etc.).

### Issues Identified:

- High interest on loans is the biggest financial challenge with over **110** responses, especially from Bahadoli (21), Chalade (20), and Columis(16).
- No financial issues were reported by a large number of farmers (100), suggesting variation across regions.

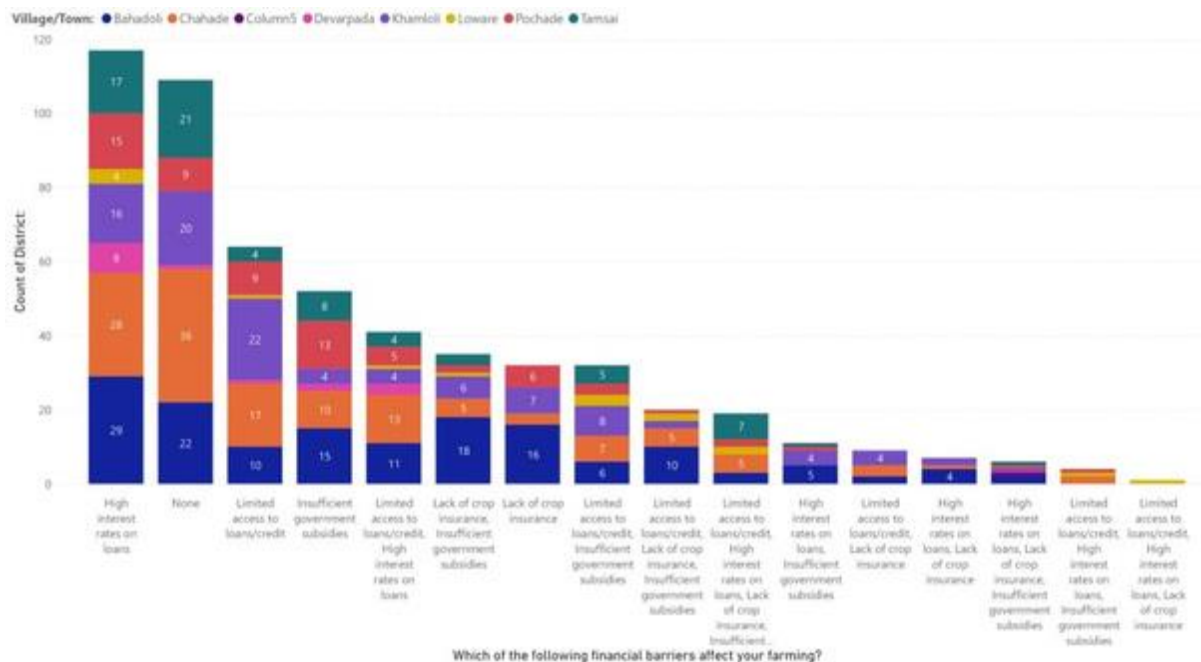
### Other common problems:

- Limited access to credit/loans
- Insufficient government subsidies
- Lack of crop insurance
- Limited access to quality seeds or irrigation

### Observation:

Villages like Bahadoli and Chalade appear frequently in almost all problem categories.

Financial issues are not the same in all villages, showing regional inequality in support.



## 2. Combined Financial Challenges

Most Common Combined Issues:

High cost of inputs

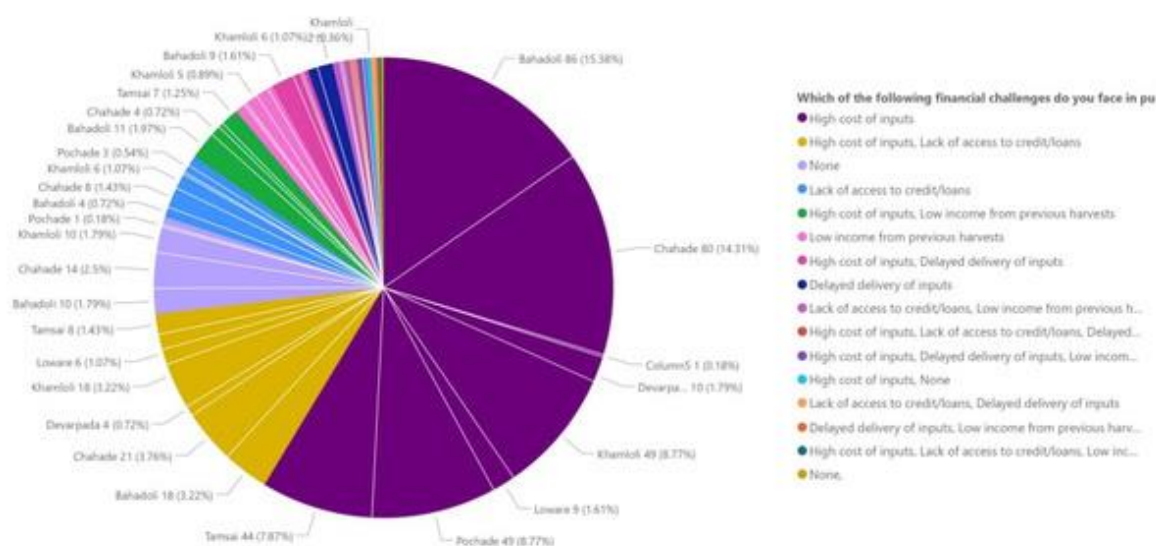
Lack of access to credit/loans – This combination accounts for the largest portion (35%), especially Bahadoli.

Other major combinations:

- High cost of inputs, delayed delivery of inputs, low income from harvests.
- Only high cost of inputs.
- Lack of credit access alone.
- Some respondents faced no problems(smallest portion).

## Conclusion & Insights

- High interest rates and lack of credit access are the most critical financial barriers.
- Government support in the form of subsidies, timely input delivery, and low-interest credit can reduce these problems.
- Village-specific planning is necessary, especially for places like Bahadoli, Chalade, and Column5, where problems are more severe.



## Modern Technology problem faced by farmer

### 1. Barriers Identified

- High cost of equipment/technology – 250 responses
- Most dominant issue across all villages, especially from Bahadoli (64), Column5 (66), and Devarpada (38).

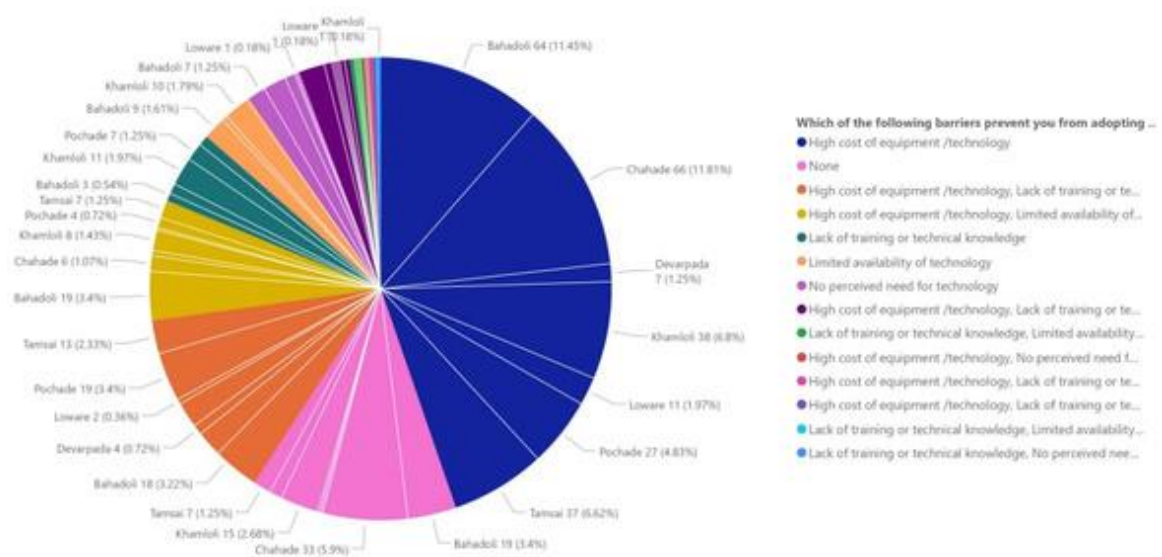
### 2. None (No barrier) – 81 responses

- A notable number of respondents indicated no barriers, especially from Loware (33) and Bahadoli (19).

### 3. High cost

- Lack of training/technical knowledge – 76 responses

4. High cost = Limited availability of technology – 47 responses
5. Lack of training/technical knowledge – 29 responses
6. Limited availability of technology – 22 responses
7. No perceived need for technology – 22 responses
8. High cost = Lack of training - Limited availability - 20 responses



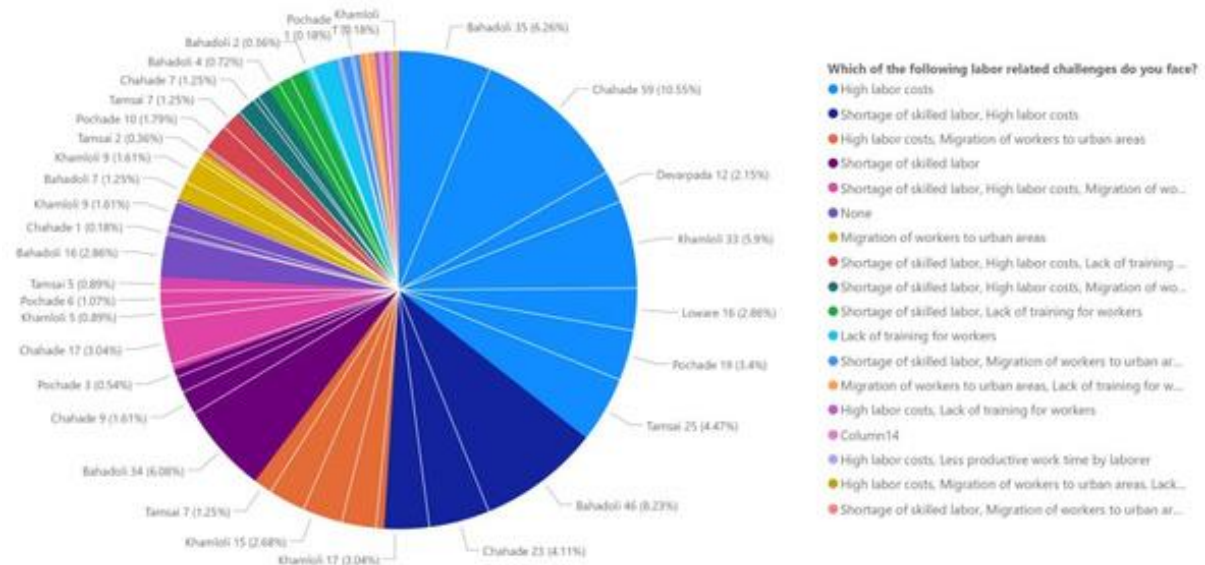
## Labor related challenges faced by farmers

### Labor-Related Challenges:

1. High labor costs – 59 responses (29.65%)
2. Shortage of skilled labor – 34 responses (16.66%)
3. High labor costs = Migration of workers to urban areas – 34 responses (16.66%)
4. Shortage of skilled labor + High labor costs – 17 responses (8.54%)







## Suggested Improvement

1. Address Climate-Related Challenges.
2. Improve Financial Access and Stability.
3. Enhance Access to Modern Technology.
4. Tackle Labor Issues.
5. General & Long-Term Improvements

### Group 5

1. Vikash Ramprakash Yadav
2. Zaujaan Mohammad Hussain Khan
3. Gurupurnima vipin Maurya
4. Ravin Lahanu Kuvra
5. Suraj Mishra



Q1. What are the major challenges farmers face in achieving proper crop yield?

Expected in the answer:

Frequency count of unique responses in:

What is the biggest challenge you face in achieving proper crop yield?

Word cloud or bar chart for visual impact. Thematic categorization (e.g., climatic, financial, technological).

Commentary on dominant challenges (e.g., "Labor shortage" being most cited).